IN THE UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

MASSACHUSETTS INSTITUTE OF TECHNOLOGY, **Plaintiff,** **v.** **HARMAN INTERNATIONAL INDUSTRIES, INCORPORATED,** **Defendant.**	**Case No.: 05-10990 DPW** **Hon. Douglas P. Woodlock** **Magistrate Judge Judith Dein**

HARMAN'S SECOND AMENDED ANSWER, COUNTERCLAIMS & RELIANCE ON JURY DEMAND/JURY DEMAND

ANSWER

Defendant Harman International Industries, Incorporated ("Harman"), by and through its attorneys Kirkland & Ellis LLP and Sherin and Lodgen LLP, answers Plaintiff Massachusetts Institute of Technology's ("MIT") complaint as follows:

Parties

1. Plaintiff MIT is an educational and research institution organized under the corporate laws of the Commonwealth of Massachusetts with a principal place of administration in Cambridge, Massachusetts.

ANSWER: Harman lacks knowledge or information sufficient to form a belief as to the truth or falsity of the allegations of Paragraph 1 and thus denies each allegation of Paragraph 1.

2. On information and belief, Defendant Harman is a Delaware corporation with corporate headquarters at 1101 Pennsylvania Avenue, N.W., Suite 1010, Washington, D.C. 2004, and a principal place of business at 8500 Balboa Blvd., Northridge, CA 91329.

ANSWER: Harman admits that Harman International Industries Incorporated is a Delaware Corporation with corporate headquarters at 1101 Pennsylvania Avenue, N.W., Suite 1010, Washington, D.C., 20004, and a principal U.S. place of business at 8500 Balboa Blvd., Northridge, CA 91329.

3. On information and belief, at least two of Harman's subsidiaries and/or divisions are located within this district.

ANSWER: Harman admits that it has one subsidiary, Lexicon, Inc., a Massachusetts corporation is located in this judicial district. Another subsidiary, Madrigal Laboratories, Inc., is shell corporation for tax purposes, and organized under the laws of Delaware. Harman denies the remaining allegations of Paragraph 3. Harman states that neither subsidiary has any connection to MIT's complaint.

Jurisdiction and Venue

4. This case arises under the patent laws of the United States, 35 U.S.C. § 1, et seq. This court has subject matter jurisdiction over this Complaint pursuant to 28 U.S.C. § 1331 and 1338.

ANSWER: Harman admits that MIT's complaint purports to state a cause of action that arises under the patent laws of the United States, 38 U.S.C. § 1 *et* seq and that this Court has subject matter jurisdiction over this Complaint pursuant to 29 U.S.C. §§ 1331 and 1338. Harman denies that any basis exists in law or fact, for such a claim against it.

5. Venue is proper in this District pursuant to 28 U.S.C. §§ 1391(b) & (c), and 1400.

ANSWER: Harman denies that venue is proper in this District, for the reasons stated in Harman's Rule 12(b)(3) Motion to Dismiss Under the First to File Rule.

COUNT I

6. MIT realleges, and incorporates by reference, the allegations contained in paragraphs 1 to 5 above.

ANSWER: Harman incorporates by reference its answers to paragraphs 1 through 5, as though full set forth herein.

7. MIT is the owner of all right, title and interest in and to U.S. Patent No. 5,177,685, entitled "Automobile Navigation System Using Real Time Spoken Driving Instructions," which issued on January 5, 1993 (the "'685 patent").

ANSWER: Harman lacks knowledge or information sufficient to for a belief as to the truth of falsity of the allegations contained in paragraph 7, and thus denies each and every allegation of paragraph 7.

8. On information and belief, Harman makes, uses, offers to sell, and sells within the United States, and/or imports into the United States, products that infringe the '685 patent, including but not limited to the TrafficPro, Traffic Pro II, RB3, RB4, Advanced Audio GPS Navigation System, and M.O.A.R. products ("Accused Products"). The Accused Products infringe, contribute to the infringement of, or induce the infringement of one or more of the claims of the '685 patent. On information and belief, this infringing activity has been, and continues to be done, with knowledge of the '685 patent, and is willful conduct which would result in enhanced damages under 35 U.S.C. § 284.

ANSWER: Harman admits that one or more of Harman's subsidiaries manufactures or has, manufactured within the United States, uses or has used within the United States, offers or has offered for sale within the United States, or imports or has imported into the United States **[or do we want to say "one or more of Harman's customers import or have imported"]** products referred to as TrafficPro, Traffic Pro II, RB4 **[RB3 is never makes it into the U.S.]**, Advanced Audio GPS Navigation System (also known as the M.O.A.R.) products. Harman denies the remaining allegations of Paragraph 8.

9. MIT has been, and is being, irreparably harmed, and has incurred, and will continue to incur, damages as a result of Harman's infringement of the '685 patent.

ANSWER: Harman denies each and every allegation of Paragraph 9.

REQUEST FOR RELIEF

WHEREFORE, MIT prays for judgment against Harman as follows:

(a) declaring that Harman has infringed the '685 patent;

(b) awarding MIT all relief available under the patent laws of the United States, including but not limited to monetary damages;

(c) awarding MIT its costs and reasonable attorneys fees in respect thereto in accordance with 35 U.S.C. §§ 284-85; and

(d) granting MIT such other relief as the Court deems just and equitable.

ANSWER: Harman denies that MIT is entitled to any judgment against Harman, or any of the relief requested. Harman respectfully requests this Court enter judgment in favor of Harman on all Counts of MIT's complaint.

HARMAN'S AFFIRMATIVE DEFENSES

Further answering MIT's Complaint and as additional defenses, Harman asserts the following affirmative defenses, without assuming the burden of proof when such burden would otherwise be on MIT:

HARMAN'S FIRST AFFIRMATIVE DEFENSE

MIT is not entitled to relief under any of the counts of its Complaint because all of those counts fail to state a claim upon which relief can be granted.

HARMAN'S SECOND AFFIRMATIVE DEFENSE

Harman does not infringe, has not infringed, has not contributed to the infringement of, and has not induced the infringement of the '685 patent, either literally or under the doctrine of equivalents.

HARMAN'S THIRD AFFIRMATIVE DEFENSE

Each claim of the '685 patent is invalid on one or more of the following grounds: under 35 U.S.C. §§ 101, 102, 103, and/or 112.

HARMAN'S FOURTH AFFIRMATIVE DEFENSE

Upon information and belief, MIT's claim for damages prior to the date it provided Harman with actual written notice of its intent to assert the '685 patent against Harman is barred in whole or in part by the failure of MIT and/or its licensees (if any) to comply with 35 U.S.C. § 287.

HARMAN'S FIFTH AFFIRMATIVE DEFENSE

MIT's claim for damages for the alleged infringement of the '685 patent is barred in whole or in part by the equitable doctrines of laches or estoppel.

HARMAN'S SIXTH AFFIRMATIVE DEFENSE

MIT's claim for damages for the alleged infringement of the '685 patent is barred in whole or in part by the defense of license.

HARMAN'S COUNTERCLAIMS FOR DECLARATION OF NON-INFRINGEMENT, INVALIDITY, AND UNENFORCEABILITY OF U. S. PATENT NO. 5,177,685

This is an action for violation of the Patent Laws of the United States, Title 35, United States Code. Jurisdiction is in this Court under 28 U.S.C. §§ 1331 and 1338(a). Venue is proper in this district under 28 U.S.C. § 1391.

Defendant Harman, by its attorneys Kirkland & Ellis LLP and Sherin and Lodgen LLP, brings this counterclaim for a declaratory judgment against MIT to resolve contested issues relating to navigation system products provided by Harman and alleges:

NATURE OF THE ACTION

1. Harman, a leading manufacturer, distributor, and retailer of consumer electronic products, prides itself on making the best audio and video products in the world. Perhaps best known for its audio equipment, Harman also makes and sells automobile navigation system products for consumers and for original equipment manufacturers ("OEMs"), also known as automobile manufacturers.

2. Plaintiff MIT has asserted against Harman, and at least one of its customers, that the Harman navigation system products infringe U.S. Patent No. 5,177,685 (the "'685 patent").

3. Plaintiff's suit jeopardizes Harman's business in several ways, including threatening Harman's customer relationships and Harman's continuing, substantial research and development of innovative, cutting-edge navigation system products. Accordingly, Harman seeks a declaration confirming its continued right to make, use, sell, offer to sell, and import its navigation system products.

4. Harman denies that its navigation system products infringe the '685 patent. Harman further contends that the '685 patent is invalid and unenforceable. Harman thus seeks a declaration from this Court resolving the present controversy whether the '685 patent is invalid and unenforceable and whether Harman's navigation system products, and its customers'

incorporation of them into their products, do not infringe the ’685 patent.

5. For its counterclaim, Harman seeks a declaration that U.S. Patent No. 5,177,685 is invalid and unenforceable. Harman also seeks a declaration that it does not infringe, contribute to infringement, or induce infringement of the ’685 patent.

JURISDICTION AND VENUE

6. This counterclaim is an action for declaration of patent noninfringement and invalidity, arising under the Declaratory Judgment Act, 28 U.S.C. § 2201 and the patent laws of the United States, 35 U.S.C. §§ 1 *et seq*.

7. This Court has original federal question jurisdiction over this action under 28 U.S.C. §§ 1331 and 1338(a). By virtue of the Complaint filed by MIT, there is an actual and justiciable controversy between Harman and MIT concerning the ’685 patent. A judicial declaration is necessary and appropriate to resolve this controversy.

8. This Court can enter the declaratory relief sought in this Complaint because this case presents an actual controversy and is within this Court’s jurisdiction pursuant to the provisions of the Federal Declaratory Judgment Act, 28 U.S.C. § 2201.

9. Venue is proper in this district under 28 U.S.C. § 1391 because the events underlying the claims herein occurred and continue to occur in this judicial district.

THE PARTIES

10. Plaintiff Harman International Industries, Incorporated is a Delaware corporation with corporate headquarters at 1101 Pennsylvania Avenue, N.W., Suite 1010, Washington, D.C. 20004 and a principal place of business at 8500 Balboa Blvd., Northridge, CA 91329.

11. Plaintiff Massachusetts Institute of Technology is, on information and belief, a Massachusetts corporation located at 77 Massachusetts Avenue, Cambridge, MA 02139-4307.

12. Plaintiff’s Manager, Intellectual Property, Mr. Robert Swartz, is a resident of Illinois

and maintains an office at 520 Lake Cook Road, Deerfield, IL.

THE BUSINESS OF HARMAN

13. Harman is a worldwide leader in the manufacture of high-quality, high-fidelity audio and electronic systems for consumer and professional use. Through its world-class engineering, manufacturing and marketing capabilities, Harman has brought to market a broad range of products, such as loudspeakers and audio, video and electronic systems for vehicle, home and computer applications. Harman's products are sold under renowned brand names, including JBL®, Infinity®, Harman/Kardon®, Mark Levinson® and Becker®.

14. Harman has established itself as a leader in digitally integrated infotainment systems for automobiles. Harman offers premium, branded car audio, video, navigation and infotainment systems to automobile manufacturers. Some of Harman's infotainment systems include radio, CD, DVD, MP3, telephone and Internet access functionality, as well as navigation.

MIT'S PATENT CLAIMS AGAINST HARMAN NAVIGATION SYSTEM PRODUCTS

15. Plaintiff, through its agent Mr. Swartz, has specifically alleged that Harman navigation system products infringe the '685 patent and demanded that Harman and at least one Harman customer take a license under the '685 patent.

16. Plaintiff filed this suit on May 12, 2005, specifically alleging that Harman's navigation system products and services infringe the '685 patent.

HARMAN'S NEED FOR DECLARATORY RELIEF

17. Harman requires declaratory relief to resolve the issues created by Plaintiff's threats to sue Harman's customers, and Plaintiff's claims of infringement, including those presented in this lawsuit. Plaintiff's unresolved claims against Harman have adversely impacted Harman's relations with its customers. In addition, Harman must be able to assure its customers that its navigation system products do not infringe the '685 patent.

18. As a result of Plaintiff's complaint alleging that Harman infringes the '685 patent, *inter alia*, an actual case and controversy exists as to the invalidity and unenforceability of the '685 patent and Harman's non-infringement of the '685 patent.

COUNT I
DECLARATION OF INVALIDITY

19. Harman repeats and realleges the allegations contained in paragraphs 1 through 18 as though fully set forth in this Complaint.

20. The '685 patent, and each of its claims, is invalid for failure to comply with one or more of the requirements of 35 U.S.C. §§ 101, 102, 103 and 112.

21. Harman is entitled to a declaratory judgment that the claims in the '685 patent are invalid under 28 U.S.C § 2201.

COUNT II
DECLARATION OF UNENFORCEABILITY

22. Harman repeats and realleges the allegations contained in paragraphs 1 through 21 as though fully set forth in this Complaint.

23. The '685 patent, and each of its claims, is unenforceable under the doctrine of inequitable conduct.

24. MIT did not disclose to the Patent Office all the pre-critical date public uses of the Back Seat Driver. *See* Ex. A at Sec. I, pgs. 1-2.

25. On or about May 5, 1992, MIT misrepresented to the Patent Office the date upon which Davis' Thesis first became available to the public. *See* Ex. A at Sec. III, pg. 4-5.

26. On or about September 4, 1990, MIT misrepresented to the Patent Office the state of the prior art with respect to CARIN. *See* Ex. A at Sec. III, pg. 4-5.

27. On or about September 4, 1990, MIT misrepresented to the Patent Office the state of the prior art with respect to navigation systems which used speech. *See* Ex. A at Sec. VI, pg. 16.

28. MIT did not disclose the Streeter Article "How to Tell People Where to Go" to the PTO. *See* Ex. A at Sec. II, pg. 3.

29. MIT did not disclose the Thoone Patent (No. 4,758,959) to the PTO. *See* Ex. A at Sec. IV, pgs. 6-7.

30. MIT withheld the "extremely relevant" prior art listed in its September 4, 1990 IDS and specifically requested by the Patent Office, misrepresenting the requested prior art as "not relevant." *See* Ex. A at Sec. V, pgs. 7-16.

31. MIT had the requisite intent to deceive the Patent Office. *See* Ex. A at Sec. VII, pgs. 16-17.

32. Harman is entitled to a declaratory judgment that all claims in the '685 patent are unenforceable under 28 U.S.C § 2201.

COUNT III
DECLARATION OF NON-INFRINGEMENT

33. Harman repeats and realleges the allegations contained in paragraphs 1 through 32 as though fully set forth in this Complaint.

34. Harman does not make, use, sell, or offer for sale a method, device or apparatus that infringes, contributes to, or induces infringement of any of the claims of the '685 patent, either literally or under the doctrine of equivalents.

35. Harman is entitled to a declaratory judgment that none of its navigation system products utilizes a method, device or apparatus that infringes, contributes to, or induces infringement of any of the claims of the '685 patent, either literally or under the doctrine of equivalents, under 28 U.S.C § 2201 and 35 U.S.C § 271.

REQUEST FOR RELIEF

36. Harman respectfully requests that this Court enter judgment as follows:

a) Declaring that the ’685 patent, and each of its claims, is invalid;

b) Declaring that the ’685 patent is unenforceable;

c) Declaring that the claims of the ’685 patent are not infringed by any method, apparatus or device employed in Harman navigation system products;

d) Awarding Harman its costs and disbursements in this action, including its reasonable attorneys’ fees; and

e) Awarding Harman such other and further relief as the Court deems just and proper.

DEMAND FOR JURY TRIAL & RELIANCE UPON MIT’S JURY DEMAND

Harman requests a trial by jury of any and all issues properly triable by a jury concerning Harman’s counterclaims against MIT. Harman also relies upon MIT’s jury demand on its claims against Harman.

Dated: April 20, 2007

Respectfully submitted,

/s/ Jamal M. Edwards /s/

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CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing **HARMAN'S SECOND AMENDED ANSWER, COUNTERCLAIMS & RELIANCE ON JURY DEMAND/JURY DEMAND** was sent by e-mail this 20th day of April 2007, addressed to counsel for MIT as follows:

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MASSACHUSETTS INSTITUTE OF TECHNOLOGY, **Plaintiff,** **v.** **HARMAN INTERNATIONAL INDUSTRIES, INCORPORATED,** **Defendant.**	**Case No.: 05-10990 DPW** **Hon. Douglas P. Woodlock** **Magistrate Judge Judith Dein**

EXHIBIT A TO
HARMAN'S SECOND AMENDED ANSWER, COUNTERCLAIMS & RELIANCE ON JURY DEMAND/JURY DEMAND

I. EVIDENCE OF PUBLIC USES PRIOR TO THE CRITICAL DATE

See Harman's Supplemental Response to MIT's Interrogatory No. 5, which is incorporated by reference here (referring to Harman's bases for invalidity of the '685 patent due to public use before the critical date). Materials produced in this case discuss public uses of the Back Seat Driver System more than one year before the filing of the patent application. Pursuant to Federal Rule of Civil Procedure 33(d), Harman further refers MIT to documents and things produced in this case, including without limitation, documents bates numbered HAR 001476-1642, MIT 00933-942, and MIT04075-04079. Mr. Schmandt testified that there was no reason to believe that such uses did not continue into July 1989, which was also before the critical date. However, MIT did not specifically and separately disclose any of those these uses to the examiner. MIT did not tell the examiner which of the claims was embodied in those uses, who

were present at those uses, where those uses took place, the purpose of those uses, whether any confidentiality covered those uses, and how many uses there were. The brief references to these uses in other papers submitted to the examiner were insufficient to allow the examiner to consider these uses during the examination of the application.

MIT has conceded that the subject matter of claims 1-12, 15, 19, 20, 23-28, 32-49, 51, 52 and 54-58 were reduced to practice at least as early as June 1989 (*See* MIT's Second Supp. Resp. to Harman Interrogatory No. 14), but MIT did not disclose this fact to the examiner. In addition, the public use of the subject matters of these claims render obvious some or all of the remaining claims of the '685 patent, so these public uses were material to the patentability of the remainder of the claims, as well.

Furthermore, MIT's internal files reveal that MIT knew that the first "publish date" of the Back Seat Driver took place in June 9, 1989. (*See* MIT 1403). Dr. Davis presented his thesis defense in May, 1989. *See* HAR 709861. Accordingly, MIT knew that the clock was ticking, and that a patent application would need to be filed on or before May, 1990 in order to avoid a statutory bar. The records produced by MIT support an inference that MIT had no plans to pursue patent protection for the Back Seat Driver until the project's sponsor, NEC, suggested that MIT should patent the system that resulted from NEC's sponsorship. It is further reasonable to infer that MIT did not want to disappoint one of its sponsors, so MIT decided to pursue patent protection even though Mr. Davis, and possibly Mr. Schmandt, realized that the Back Seat Driver was merely a re-hash of work done by others, and that the system had been publicly disclosed at least as early as June 9, 1989. The MIT Media Lab relies heavily on its sponsors to fund its research projects, and Mr. Davis and Mr. Schmandt were motivated by the desire to please a large sponsor, NEC.

II. THE STREETER ARTICLE WAS NOT DISCLOSED

The inventors did not specifically disclose the Streeter article (HAR 000192-206) to the PTO, and did not provide a copy of the reference to the examiner, even though they were aware of and possessed a copy of the article, as evidence by the citation of the article in at least three of the inventors' publications: (1) in MIT 00938-42 (allegedly published Sept. 1989) Davis stated that they were "influenced by an experiment on route following which compared spoken instructions with paper maps," and cited this article in a footnote as referring to the experiment mentioned; (2) in Schmandt, *et al*, "Synthetic Speech For Real Time Direction-Giving," *IEEE Trans. On Consumer Elec.*, vol. 35, pp. 649-53 (Aug. 1989), the author(s) refers to Streeter for "evidence that drivers do better following spoken directions than reading maps . . ."; (3) in Davis' thesis which cites this article (HAR 1495) stating "[n]either navigation aid in the Streeter experiment included information about the current positions. Both required the driver to determine when to carry out the instruction and to decide whether the instruction was correctly executed . . . the experiment did not compare voice to either an electronic map (indicating current position as well as route) or directional symbols (indicating which way to go). For this reason, the experiment does not directly answer the question about choice of modality. It is, at best, suggestive." This article admittedly influenced the inventors and certainly would have been material to the PTO as prior art published before the critical date. In fact, Dr. Pasternack in his deposition admitted to citing separately in the IDS other articles that have been referenced in Davis' thesis, nevertheless the Streeter article was not separately cited in the IDS. As such, by not separately and specifically disclosing this article to the PTO the inventors intentionally failed to provide the examiner with material information regarding the novelty of their invention.

III. THE INVENTOR(S) MADE MATERIAL MISREPRESENTATIONS TO THE PTO

The PTO Examiner initially rejected claims 1-58 under 35 U.S.C. §102(e) as being anticipated by the PhD thesis of J.R. Davis. *See* MIT 00712. MIT responded to the PTO that "the thesis ***did not become available*** to the public more than a year before the filing date of the present application, and is therefore not 102 art with respect to the present application." *Id*., *emphasis added*. This statement to the PTO is false in light of Dr. Davis' thesis defense on May 26, 1989, the disclosure of the subject matter to UROP students, including Gregory Grove, and demonstrations of the working prototype more than one year prior to the filing date to representatives of NEC and Bell Labs. Harman also refers MIT to Harman's Response to Interrogatory No. 5, incorporated here by reference (referring to Harman's bases for invalidity of the '685 patent due to public use before the critical date).

The Invention Disclosure Statement, at page 5, states that "[v]ery little has been published about the [Phillips' CARIN] system." This was an intentional misrepresentation made by the inventors to ensure that the examiner did not make an effort to search for other CARIN prior art. CARIN was widely-known and much had been published regarding this navigation system at the time MIT filed the patent application for the '685 patent. Such information regarding this system would clearly have been material to the patent examiner for the purposes of determining the novelty of the invention. Furthermore, at that time this statement was made it was blatantly false - there were numerous articles published concerning CARIN, including articles in major publications with enormous readership, including but not limited to the following:

HAR 275215
HAR 275206-212
HAR 206962-63
HAR 277085-086
HAR 097308-15
HAR 97332-58

HAR 275171-72
HAR 275204-05
HAR 275424-25
HAR 275218–24
HAR 275432-607
HAR 275426-31
HAR 275008-13
HAR 275047-54
HAR 275664-79
HAR 275311-29
HAR 275303-10
HAR 275295-302
HAR 275282-94
HAR 275014-25
HAR 093821-29
HAR 095075-78
HAR 094602-855
HAR 09579-90
HAR 276360-71
HAR 206903-08
HAR 206912-15
HAR 206916-17
HAR 206944-46.
HAR 206923-28
HAR 206921-23
HAR 206916-17
HAR 206947-61
HAR 206990-94
HAR 207002-07
HAR206995-207001
HAR 207008-11
HAR 207012-15.
HAR 207261-67
HAR 207027-31
HAR 27684- 86
HAR 276438-47
HAR 276436-37
HAR 276298-30

"'Intelligent' Vehicle/Highway Systems A Summary of Activities Underway, Worldwide," by David K. Willis, presented at the February 6-8, 1968 ASCE International Conference on Applications of Advanced Technologies in Transportation Engineering held in San Diego, CA.

"The Car Information and Navigation System CARIN and Use of Compact Disc Interactive," by Thoone, et al, SAE Technical Paper Series, February 23-27, 1987.

Geographic Data Files, Release 1.0 1988-10-01 copyright NV Phillips' Gloeilampenfabriken and Robert Bosch GmbH.

"Carin, een navigatie- en informatiesysteem voor auto's," by Thoon, published in Philips Technisch Tijdschrift, September 1987.

"Digital Electronic Mapping of European Territory (Demeter)" by L. Heres, H. Claussen, W. Lichtner, and D. Schlage, published in Programme – 18th International Symposium on Automotive Technology and Automation, May 30-June 3, 1988.

Furthermore, Dr. Davis specifically commented in his thesis that the CARIN system was "potentially interesting." *See* HAR 001584. This statement was specifically and purposefully omitted from this section of the thesis text which was otherwise copied the patent application. *See* MIT 00766; *see also* MIT 07388 noting that "[i]t seems that the process used to develop the application was to delete from Jim's thesis …" The selective deletion of this characterization of CARIN is further evidence of MIT's failure to meet the duty of candor with the PTO.

IV. THE THOONE PATENT (NO. 4,758,959) WAS NOT DISCLOSED

The Thoone Patent covers the CARIN system discussed above. Davis' thesis mentions Thoone's work at HAR 001548, noting

> [t]he Phillips corporation in the Netherlands is developing a prototype car information and navigation system called CARIN. The driver enters a destination using either a keyboard or a touch sensitive screen. The system displays routes on a map and gives spoken driving instructions. The map is stored on board in CDROM and a radio link provides for updates on traffic conditions. The system is potentially interesting, but very little has been published about it.

In addition, as discussed above, the Invention Disclosure Statement, at page 5, also discuss the Phillips' CARIN system. The inventors submitted the Thoone article to the PTO, but did not submit the Thoone patent. Neither Mr. Schmandt nor Dr. Pasternack recalls whether he performed a search for the Thoone patent during the prosecution of the '685 patent. *See* Schmandt Dep. at 173:15-17; Pasternak Dep. at 118:6-8. During the patent application process, NEC specifically notified MIT that additional relevant patents existed and that it considered the '685 patent application to be a "strange and non-conventional application" in that "[i]t does not appear that any prior art patent search was done" and that "[i]n fact there are more than 100

patents relating to vehicle navigation." Despite this caution from NEC, and despite the inventors' knowledge of the CARIN system, the Thoone patent was not separately and specifically disclosed to the patent examiner even though it was clearly material to the inventions novelty. Harman believes MIT failed to disclose other patents that were cited by NEC.

V. ADDITIONAL MATERIAL, INCLUDING "EXTREMELY RELEVANT" PRIOR ART IN THE POSSESSION OF THE INVENTOR(S), WAS WITHHELD

In the 11/8/91 Office Action, the PTO Examiner states "… many of the prior art documents cited by applicant seem to be extremely relevant to the invention given their description in the specification, in Mr. Davis Ph.D. thesis, and in the Information Disclosure Statement. These documents may be used as basis for all or part of a rejection, as needed, and applicant is requested to forward any such prior art documents (those used in a rejection) along with any others that applicant would like to have considered by the examiner or thereby formally made of record." *See* File History at p. 96, HAR 000118. Notwithstanding this statement, the inventor(s) never provided these references to the PTO. These references were specifically cited as material to the examiner in determining the patentability of the invention. Furthermore, it is clear that the inventor(s) did possess copies of these references, as evidenced by their citation to the references in the Davis thesis, including each of the following:

1. "Way to Go from A to B" by Ron Alexander, New York Times, March 11, 1989, page 52.

2. "Function, Equipment, and Field testing of a Route Guidance and Information System for Drivers (ALI)" by Peter Braegas, IEEE Transactions on Vehicular technology, VT-29(2): 216-225, May 1980.

3. "A voice interface to a direction giving program" by James R. Davis, Technical Report 2, MIT Media Laboratory Speech Group, Apr. 1988 (replaces the paper in the 1986

AVIOS proceedings titled "Giving Directions: A voice interface to an urban navigation program.").

4. "Direction assistance." By James R. Davis and Thomas F. Trobaugh, Technical Report 1, MIT Media Laboratory Speech Group, Dec. 1987.

5. "Route finding in street maps by computers and people" by R.J. Elliott and M.E. Lesk, in Proceedings of the National Conference on Artifical Intelligence, pages 258-2651, 1982.

6. "A formal basis for the heuristic determination of minimum cost paths" By P.E. Hart, N.J. Nilsson, and B. Raphael, IEEE Transactions on SSC, 4:100-107, 1968.

7. "The TIGER Structure" by Christine Kinnear in AUTO CARTO 8 International Symposium on Automation in Cartography, April 1987.

8. "The TIGER system: automating the Geographic Structure of the United States Census" by Robert W. Marx, Government Publications Review, 13:181-201, 1986.

9. "GIS, TIGER, and Other Useful Acronyms" by Robert W. Marx, National Conference of Geographic Information Systems, Canadian Institute for Surveying and Mapping, March 1989.

10. "Programs for assuring map quality at the bureau of the census" by Robert W. Marx and Alan J. Saalfeld, Fourth Annual Research Conference, Geography Division, Room 3203-4, Bureau of the Census, U.S. Department of Commerce, Washington, DC 20233, March 1988.

11. "An electronic route-guidance system for highway vehicles" by Dan A. Rosen, Frank J. Mammano, and Rinaldo Favouit, IEEE Transactions on Vehicular Technology, VT-19(1): 143-152, Feb. 1970.

12. "Mapping out a new idea" by Ronald Rosenberg, The Boston Globe, February 17, 1987, page 39.

13. "Principal components of the census bureau's tiger file" by Joel Sobel in Research in Contemporary and Applied geography Discussion Series 3, department of Geography, SUNY Binghamton, 1986.

Furthermore, there were several additional references cited in the Davis thesis that were never identified in the IDS and were not provided to the examiner, including:

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VI. DAVIS MADE MATERIAL MISREPRESENTATIONS TO THE PTO IN HIS THESIS

The Davis thesis paper, incorporated by reference into the patent, misrepresents the content of the prior art by telling the examiner that "[a]lthough there are reports of earlier navigation systems using speech, none are described in the literature." *See* Davis Thesis at p. 16, footnote 2. This statement was knowingly false, as the inventors themselves knew of prior art literature that described navigation systems that used speech, including without limitation references to CARIN and other publications by the inventors as discussed above, and HAR 006949-950, HAR 276519-27, HAR 093830-40, and HAR 09846–55.

VII. DAVIS AND SCHMANDT HAD THE REQUISITE INTENT

Davis and Schmandt had motivation to hide the material prior art from the examiner. Davis had spent a significant amount of time on this thesis project, and he knew that if his advisor, Mr. Schmandt, found out that someone else had already developed a system like the Back Seat Driver, that Davis would have to start over with a new thesis project, which would delay his completion of his PhD program. Davis Dep. at 173:19-176:2. When it came time to tell the examiner and/or the prosecuting attorney about the earlier, speech-based navigation systems of which Davis was aware, Davis knew that if he disclosed the material prior art at that time, he would have to expose the fact that his thesis project was knowingly nothing more than a re-hash of work previously done by others. He knew that MIT did not allow thesis projects to cover such work. *See id*; *see also* Schmandt Dep. 78:1-14. Davis knew that his PhD could have been revoked by MIT, resulting in significant embarrassment to himself, his reputation, the reputation of his advisor, Mr. Schmandt, and to MIT. *See* Schmandt 82:4-15.

Furthermore, MIT was under pressure from the sponsor of the project, NEC who had the option to license rights under any patent and who expressed concerns about the irregularities of the patent application. *See* MIT 07387-88.

In addition, the MIT witnesses cannot get their story straight as to who participated in and was responsible for the prosecution of the patent. Davis denies participating or assisting Pasternack, prosecution counsel, in prosecuting the '685 patent, including reviewing any drafts. Davis Dep. at 113:1-116:10. In contrast, Pasternak denied having met with Schmandt during the prosecution of the patent. Pasternak Dep. at 58:19-23. He also testified that he asked Davis for references and prior art, but was unable to obtain copies of references after asking for them. *Id*. at 97:4-12. In addition, he recalls meeting with Davis. *Id*. at 49:5-8. Pasternak denies that Schmandt wrote any sections of the IDS or any of the claims. *Id*. at 48:21-23, 49:21-23. Schmandt testified that he was "substantively involved" in the prosecution of the '685 patent application, and in particular, involved with the IDS. Schmandt Dep. at 48:17-24; 81:2-18. He also stated that Davis was more involved in the patent prosecution than he was. *Id*. at 49:6-10. Regardless, of which story is correct and no matter where the fault lies, it is clear that there was material information withheld from the PTO during the prosecution of this patent. In addition, the motivations of the inventor(s), the affirmative misrepresentations present in the patent and thesis, and the seemingly unbelievable failure of anyone to locate and produce even requested documents to the PTO evidences the willfulness of these actions and meets the standards of inequitable conduct.

Harman further responds that this topic is subject matter of one or more expert report(s), which are be hereby incorporated by reference.

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I hereby certify that a copy of **EXHIBIT A TO HARMAN'S SECOND AMENDED ANSWER, COUNTERCLAIMS & RELIANCE ON JURY DEMAND/JURY DEMAND** was delivered by electronic means this 20th day of April, 2007, to counsel for MIT as follows:

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